

Customer No.: 31561
Docket No.: 14217-US-PA-X
Application No.: 10/710,818

REMARKS

Present Status of the Application

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the AAPA of this application in combination with Shokouhi et al. (US patent 6,249,458).

Applicant has amended claim 1 to more clearly define the present invention. Supporting grounds can be found in figures 3B and 3D. No new matter has been added to the application by the amendments made to the claims. This Amendment is promptly filed to place the above-captioned case in condition for allowance. After carefully considering the remarks set forth in this Office Action and the cited reference, Applicant respectfully submitted that the presently pending claims are in condition for allowance. Reconsideration and withdrawal of the Examiner's rejection are requested.

Discussion of Office Action Rejections

Applicant respectfully traverses the rejection of claims 1-10 under 103(a) as being unpatentable over AAPA in view of Shokouhi et al. (US patent 6,249,458) because a prima facie case of obviousness has not been established by the Office Action.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

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The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

"See M.P.E.P. 2143, Latest Revision August 2006".

The present invention is in general related an electrostatic discharge (ESD) protection device as claim 1 recites:

Claim 1. An electrostatic discharge (ESD) protection device, comprising:
an ESD protection circuit, comprising:

at least a diode connected in series between a first voltage and a pad; and

at least an ESD component connected in series between a second voltage and a pad,

wherein *each of the at least an ESD component is composed of a deep N-well region formed in a P-type substrate, a triple P-well formed in the deep N-well region, and a highly doped N-type (N+) region and a highly doped P-type (P+) region formed in the triple P-well region*, wherein the N+ region of the ESD component is connected to the pad, and the P+ region of the ESD component is connected to the second voltage, *and the deep N-well region is floating.*

Applicant submits US 6,249,458 fails to teach the deep N-well region is floating. In Fig. 7 (US 6,249,458), the deep-N well 720 of the triple well structure is connected to Vcc. However, the deep N-well region of the present invention is floating. That is, the deep N-well region of the present invention is not connected to any circuit or power supply. Therefore, the triple well structure formed of a P-type substrate, a deep N-well

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region formed in the P-type substrate and a triple P-well formed in the deep N-well region of the present invention is different from the structure composed of the P-substrate 710, the deep N-well 720 and the P-well 730 shown in Fig. 7 (US 6,249,458). If the AAPA is combined with the structure of Fig. 7 (US 6,249,458), the deep N-well is connected to Vcc. However, the deep N-well region of the ESD component is floating in the present invention.

For at least the foregoing reasons, Applicant respectfully submits that the prior references fail to teach or suggest each of the at least an ESD component is composed of a deep N-well region formed in a P-type substrate, a triple P-well formed in the deep N-well region, and a highly doped N-type (N+) region and a highly doped P-type (P+) region formed in the triple P-well region, and the N+ region of the ESD component is connected to the pad, and the P+ region of the ESD component is connected to the second voltage, *and the deep N-well region is floating*. The prior art references combined do not teach or suggest each and every element in claim 1.

Therefore, Applicant respectfully submits a prima facie case of obviousness has not been established by the Office Action. Independent claim 1 patently define over the prior art references, and should be allowed. For at least the same reasons, dependent claims 2-10 patently define over the prior art as a matter of law.

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CONCLUSION

In view of the foregoing, it is believed that all pending claims are in proper condition for allowance. If the Examiner believes that a conference would be of value in expediting the prosecution of this application, he is cordially invited to telephone the undersigned counsel to arrange for such a conference.

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Respectfully submitted,

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